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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,030	03/24/2005	Ying Zheng	112701-496	9037
29157 7590 12/12/2008 BELL, BOYD & LLOYD LLP P.O. Box 1135 CHICAGO, IL 60690				
EXAMINER GEORGE, PATRICIA ANN				
ART UNIT		PAPER NUMBER		
1794				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATENTS@BELLBOYD.COM

Office Action Summary

Application No.

10/529,030

Applicant(s)

ZHENG ET AL.

Examiner

Patricia A. George

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 25-40, 43 and 45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24, 41-42, and 44 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date 9/22/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claim 25-40 and 43 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected groups, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/11/2008. Applicant's election of 1-24, 41-42, and 44 in the reply is acknowledged. Please see the rejections below.

Claim Objections

Claim 14 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 14 does not further limit claim 1 because it claims "or that mask off flavors in the coffee aroma-providing components", which is not a subject matter claimed in independent claim 1, and therefore fails to further limit the subject matter claimed in the previous claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 7, 9-11, 13, 14-21, 22, 42, and all claims dependent on them, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims appear to be a filing from a foreign document and are replete with grammatical and idiomatic errors. The claims are generally narrative and indefinite, and applicant is encouraged to amend to conform with current U.S. format. Because the elected group of claims is toward a process, it is suggested that applicant use active process steps when formatting process claims.

The following rejections may not be an exhaustive list, but are exemplary of issues found therein. Applicant is encouraged to carefully amend the claims in compliance with each claimed instance of the issues recited below.

Relative Terms.

Relative terms that are not defined by the claim, or the specification, do not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Following is a list of relative terms found in the claims presented for examination:

The term "desirable" is found in claims 1, 10, 14, 16, and 22. This term is a relative term because there is no phrase provided that defines relativity, for example, in the case of coffee flavor as in claim 1, the term can be interpreted to mean bitter or mellow.

The term "undesirable" is found in claims 1, 10, 14, and 15. This term is a relative term because there is no phrase provided that defines relativity, for example, in the case of coffee flavor as in claim 1, the term can be interpreted to mean bitter or mellow.

The term "significant" is found in claim 1. This term is a relative term because there is no phrase provided that defines relativity, for example, in the case of "retains a significant portion" as in claim 1, the term can be interpreted to mean an enormous quantity in size, or the minimal chemical amount required to produce a chemical effect.

The term "off flavor" is found in claims 1 and 14. This term is a relative term because there is no phrase provided that defines relativity, for example, in the case of coffee flavor as in claim 1, the term can be interpreted to mean bitter or sweet flavors.

Indefinite Phrases and Terms.

Regarding claims 14, 15, 19, 20, and 22, the phrase "amount sufficient" renders the claim(s) indefinite because it contains the relative term "insufficient". It is unclear as to how much a sufficient amount would be because there is no point of relativity provided, and the term could be interpreted to mean an amount that is a catalyst for a chemical reaction, or an amount that has a specific effect. The term "sufficient" is also used in the phrase "to exhibit sufficient reducing power", which is found in claim 20. This phrase is also indefinite because it is unclear as to how much a sufficient reducing power is.

Regarding claim 13, the term "improved" renders the claim(s) indefinite because it is unclear as to what constitutes an improvement. This phrase "improved" can be interpreted to mean a product more sellable and therefore has an improved financial value, or a product is improved because an undesirable characteristic, such as a musty scent, is less detectable.

Regarding claims 1, 9, 10, 14, 17, and 22, the term "associated with" renders the claim(s) indefinite because it is unclear as to what constitutes an association because it can be interpreted to mean physical proximity, chemical compatibility, or even a known combination. Claim 21 is also rejected for use of the term "associating" which presents similar indefiniteness.

Regarding claims 7, 11, and 42, the term "incorporating the stabilizing agent into a material" renders the claim(s) indefinite because it is unclear as to what type of incorporation is occurring, such as: the stabilizing agent is being treated in a manner that turns it into another material; the stabilizing agent is being put in to a container made of a second material; or the stabilizing agent is being mixed with a second compound to form a third compound.

Regarding claim 18, the term "generates" renders the claim(s) indefinite because it is unclear whether the generation naturally occurs, is part of a reaction, or an essential step is missing that is a catalyst for such a generation.

Insufficient Antecedent Basis

Claim 14 recites the limitation "the undesirable reactive compounds". There is insufficient antecedent basis for this limitation in the claim because undesirable reactive compounds have not been previously claimed.

Claim 22 recites the limitation "the carbonyl groups". There is insufficient antecedent basis for this limitation in the claim because carbonyl groups have not been previously claimed.

Markush Groups

Claims 19 and 20 appear to be Markush groups, but fail to be written in proper language, as defined by the MPEP (Section 803.02.): "selected from the group consisting of A, B and C" or in the alternative defined by MPEP (Section 2173.05(h): "wherein R is A, B, or C".

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-24, are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-22 and 24-25 of U.S. Patent No. 7,056,546.

The difference between the claims of USPN 7,056,546 and the instant invention is that the independent claim (claim 1) of USPN 7,056,546 teaches further limitations that are not claimed in the instant invention, such as:

the aroma providing component is isolated, concentrated, or separated from a food or beverage, food-forming or beverage forming material;

the stabilizing agent is a nucleophile that contains at least one atom of sulfur or nitrogen providing at least one lone pair of electrons for reaction; and

when combining the aroma-providing component with the material to form the product for consumption the aroma-providing component imparts to the product an improved or enhanced aroma compared to the aroma provided by an unstabilized aroma-providing component.

Claim 13 of 7,056,546 was relied on, only for the inclusion of coffee (i.e. coffee aroma providing component).

Following is a table showing which claims of the USPN read on corresponding claims in the instant invention. For example claim 13, of the USPN, reads on claim 1 of the instant invention.

<u>Claim of U.S. Patent No. 7,056,546</u>	<u>Claim of Instant Invention</u>
13 (including independent claim 1)	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
24	23
25	24

Claims 1, 17-19, 23-24 and 42 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-4, 7-8, and 13 of U.S. Patent No. 7,056,545.

The difference between the claims of USPN 7,056,545 and the instant invention is that claim 1 of 7,056,545 teaches further limitations that are not claimed in the instant invention, such as:

the aroma providing component is isolated, concentrated, or separated from a food or beverage, food-forming or beverage forming material;

the stabilizing agent is a nucleophile that contains at least one atom of sulfur or nitrogen providing at least one lone pair of electrons for reaction; and

when combining the aroma-providing component with the material to form the product for consumption the aroma-providing component imparts to the product an improved or enhanced aroma compared to the aroma provided by an unstabilized aroma-providing component.

Claim 13 of 7,056,545 was relied on, only for the inclusion of coffee (i.e. coffee aroma providing component).

Following is a table showing which claims of the USPN read on corresponding claims in the instant invention. For example claim 13, of the USPN, reads on claim 1 of the instant invention.

<u>Claim of U.S. Patent No. 7,056,545</u>	<u>Claim of Instant Invention</u>
13 (including independent claim 1)	1
2	17
3	18
4	19
7	23-24
8	42

Claims 1, 16, 17, 18, and 19, are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-4 and 6 of U.S. Patent No. 7,060,315.

The difference between the claims of USPN 7,060,315 and the instant invention is that claim 1 of 7,060,315 teaches further limitations that are not claimed in the instant invention, such as:

the aroma providing component is isolated, concentrated, or separated from a food or beverage, food-forming or beverage forming material;

the stabilizing agent is a nucleophile that contains at least one atom of sulfur or nitrogen providing at least one lone pair of electrons for reaction; and

when combining the aroma-providing component with the material to form the product for consumption the aroma-providing component imparts to the product an improved or enhanced aroma compared to the aroma provided by an unstablized aroma-providing component.

Claim 6 of 7,060,315 was relied on, only for the inclusion of coffee (i.e. coffee aroma providing component).

Following is a table showing which claims of the USPN read on corresponding claims in the instant invention. For example claim 6, of the USPN, reads on claim 1 of the instant invention.

<u>Claim of U.S. Patent No. 7,060,315</u>	<u>Claim of Instant Invention</u>
6 (including independent claim 1)	1
2	16
3	18
4	19

Claims 1, and 17-19, are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2, 4-5, and 9 of U.S. Patent No. 6,960,362.

The difference between the claims of USPN 6,960,362 and the instant invention is that claim 1 of 7,060,315 teaches further limitations that are not claimed in the instant invention, such as:

the aroma providing component is isolated, concentrated, or separated from a food or beverage, food-forming or beverage forming material;

the stabilizing agent is a nucleophile that contains at least one atom of sulfur or nitrogen providing at least one lone pair of electrons for reaction; and

when combining the aroma-providing component with the material to form the product for consumption the aroma-providing component imparts to the product an improved or enhanced aroma compared to the aroma provided by an unstablized aroma-providing component.

Claim 9 of 6,960,362 was relied on, only for the inclusion of coffee (i.e. coffee aroma providing component).

Following is a table showing which claims of the USPN read on corresponding claims in the instant invention. For example claim 9, of the USPN, reads on claim 1 of the instant invention.

<u>Claim of Instant Invention</u>	<u>Claim of U.S. Patent No. 6,960,362</u>
9 (including independent claim 1)	1
2	17
4	18
5	19

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7-8, 10-22, and 42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Reich (3,421,906).

As for claim 1, 2, 7-8, 10-22, and 42, Reich teaches coffee stabilization using sulfur dioxide (as in claims 10-22). Reich teaches a process for stabilizing coffee (i.e. coffee aroma-providing component) against loss or degradation of desirable flavor or sensory characteristics of its aroma during storage comprising contacting the coffee (i.e. aroma-providing component) with a sulfite (i.e. stabilizing agent) in a manner such that the sulfite (i.e. stabilizing agent) is provided in an amount effective to chemically interact with ammonia (i.e. a material, as in claims 7-8, and 42) to remove undesirable odor (i.e. compounds associated with the aroma-providing component) to form a stabilized coffee (i.e. aroma-providing component) which: retains a significant portion of

flavor or sensory characteristics of the coffee aroma in the coffee (as in claims 1, 2, and 10-22). See column 6, lines 27-40

The claims appear to differ as to explicitly retaining a significant portion of desirable characteristics during storage, however, the prior art teaches the claimed components and process steps. Consequently, increasing amounts of compounds that provide or improve desirable flavor and reducing amounts of compounds that suppress desirable flavor characteristics would be inherent and/or obvious to that of Reich.

Claims 1-6, 9-24, 41, and 44, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bel Rhlid (EP0963706).

As for claim 1, Bel Rhlid teaches a precursor flavoring mixture, which forms thiols upon heating. See paragraphs 0001-0003.

As for claims 2-6, and 41, Bel Rhlid teaches extraction is used to pass the mixture before consumption. See paragraphs 0022 and 0040.

As for claims 10-22, Bel Rhlid teaches it is known that the thiols groups present in the food flavorings release an odor of roast (as in claim 13), during the cooking of certain food compositions, such as, during the roasting of coffee. See paragraph 0003. Bel Rhlid teaches thiols (as in claims 16) are unstable compounds that are oxidized out of corresponding disulphide, compounds of disulphide, sulfhydryles groups, in particular cysteines, or bridges disulphides, in particular of cystines. See paragraphs 0004-0006.

As for claims 9, 23-24, and 44, in paragraph 0016, Bel Rhid teaches the method is stable for the production of freeze dried coffee and other reconstituted foods and beverages (i.e. with a package for storing, as in claim 9).

The claims appear to differ as to explicitly retaining a significant portion of desirable characteristics during storage, however, the prior art teaches the claimed components and process steps. Consequently, increasing amounts of compounds that provide or improve desirable flavor and reducing amounts of compounds that suppress desirable flavor characteristics would be inherent and/or obvious to that of Bel Rhid et al.

Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 58203865.

As for claim 1, 865' teaches a precursor flavoring mixture, which includes sulfites with roasted coffee in a gas impervious package that keeps the CO₂ below 1% and provides fresh flavor of coffee over a long period of time. See abstract.

The claims appear to differ as to explicitly retaining a significant portion of desirable characteristics during storage, however, the prior art teaches the claimed components and process steps. Consequently, increasing amounts of compounds that provide or improve desirable flavor and reducing amounts of compounds that suppress desirable flavor characteristics would be inherent and/or obvious to that of 865'.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia A. George whose telephone number is (571) 272-5955. The examiner can normally be reached on Tue. - Fri. between 9:00 am and 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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